ORDA Data Quality Assessment

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Data Quality Examples

- Problems fixed
  - Incorrect range normalization
  - Noisy data in the range folded region.
  - High reflectivity values caused by incorrect calibration.
  - Bad velocity values caused by initial problems with new hardware.
  - Bad velocity values caused by incorrect processing of VCP 121.
  - Incorrect range folding on upper tilts.

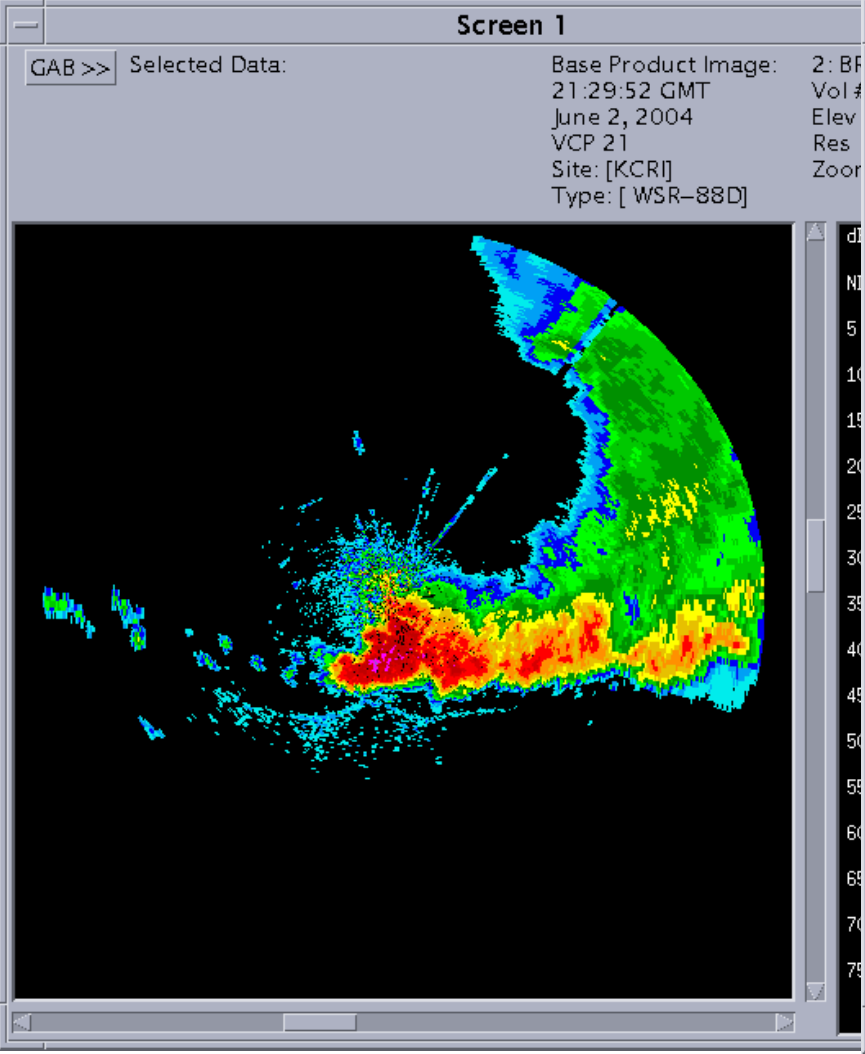
Data Quality Examples (cont)

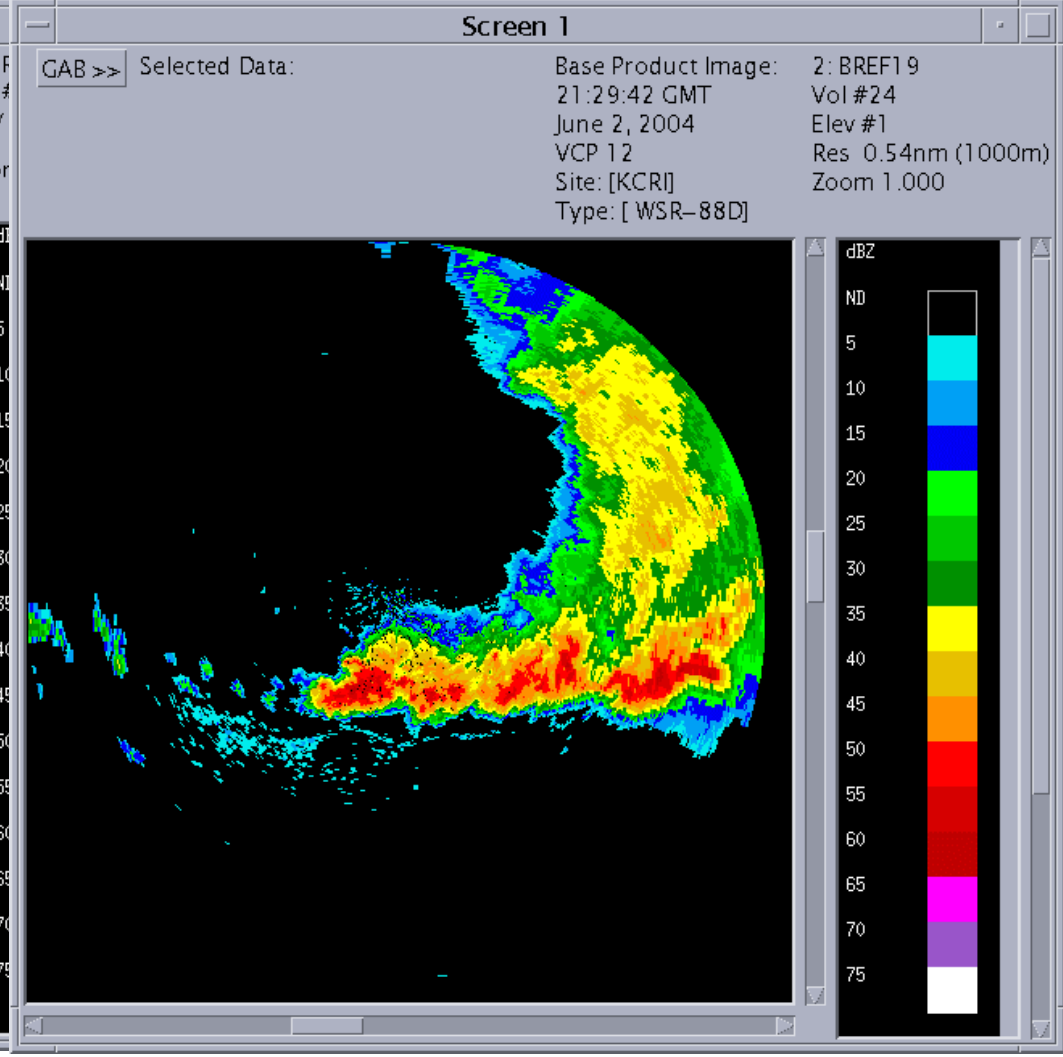
- Problems remaining
  - Excessively high velocity values at higher tilts.
  - Excessively high spectrum width values at higher tilts.
  - Noise in velocity and spectrum width upper tilts.
  - Bad velocity values on upper tilts in VCP 31.

Data Quality Examples (cont)

- Good looking data
  - Reflectivity comparison
  - Velocity comparison
  - GMAP filter example
  - REC example
- Algorithm comparison
  - Max VIL comparison
  - VWP winds at 2,000 ft

Problems Corrected

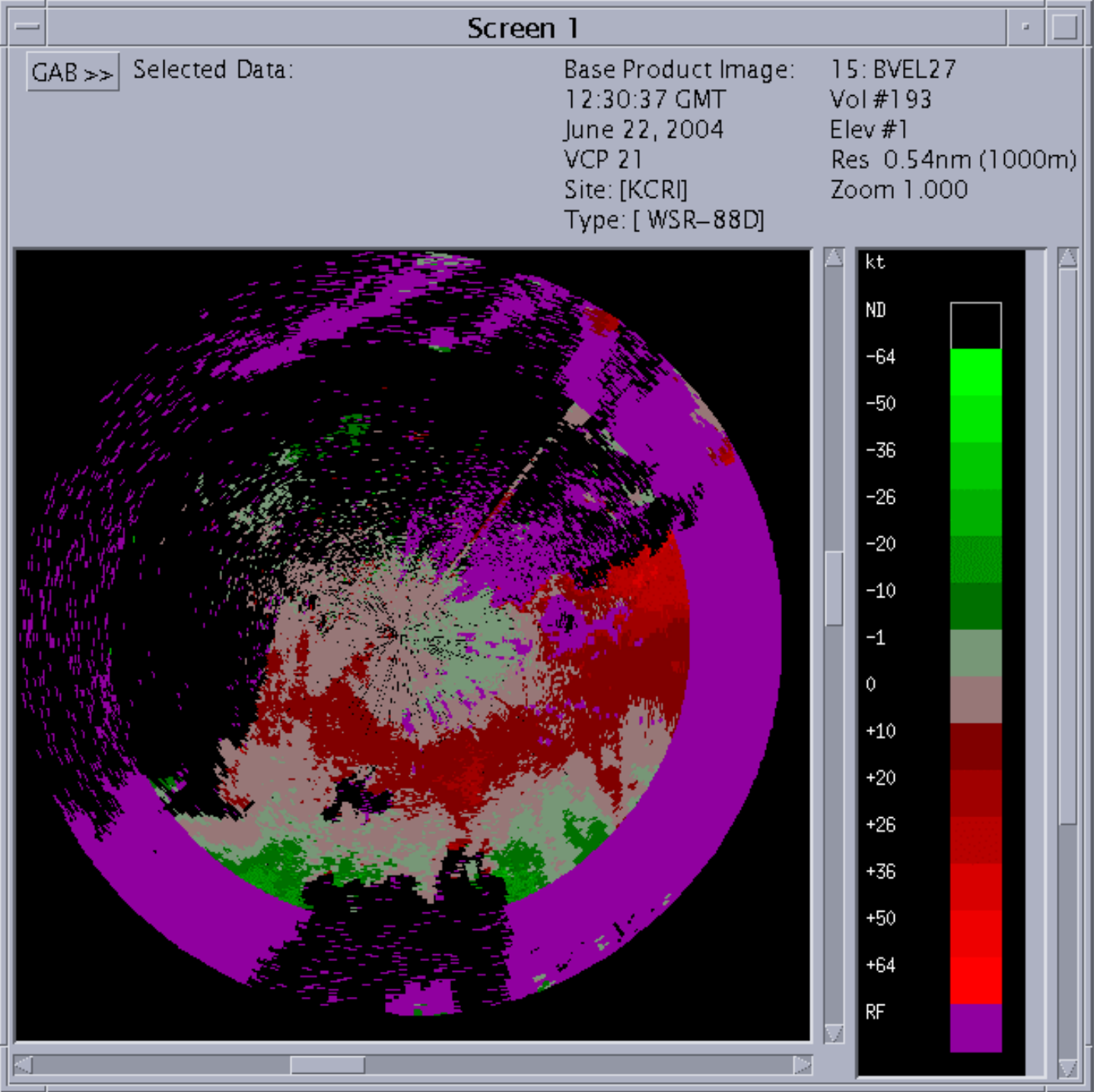




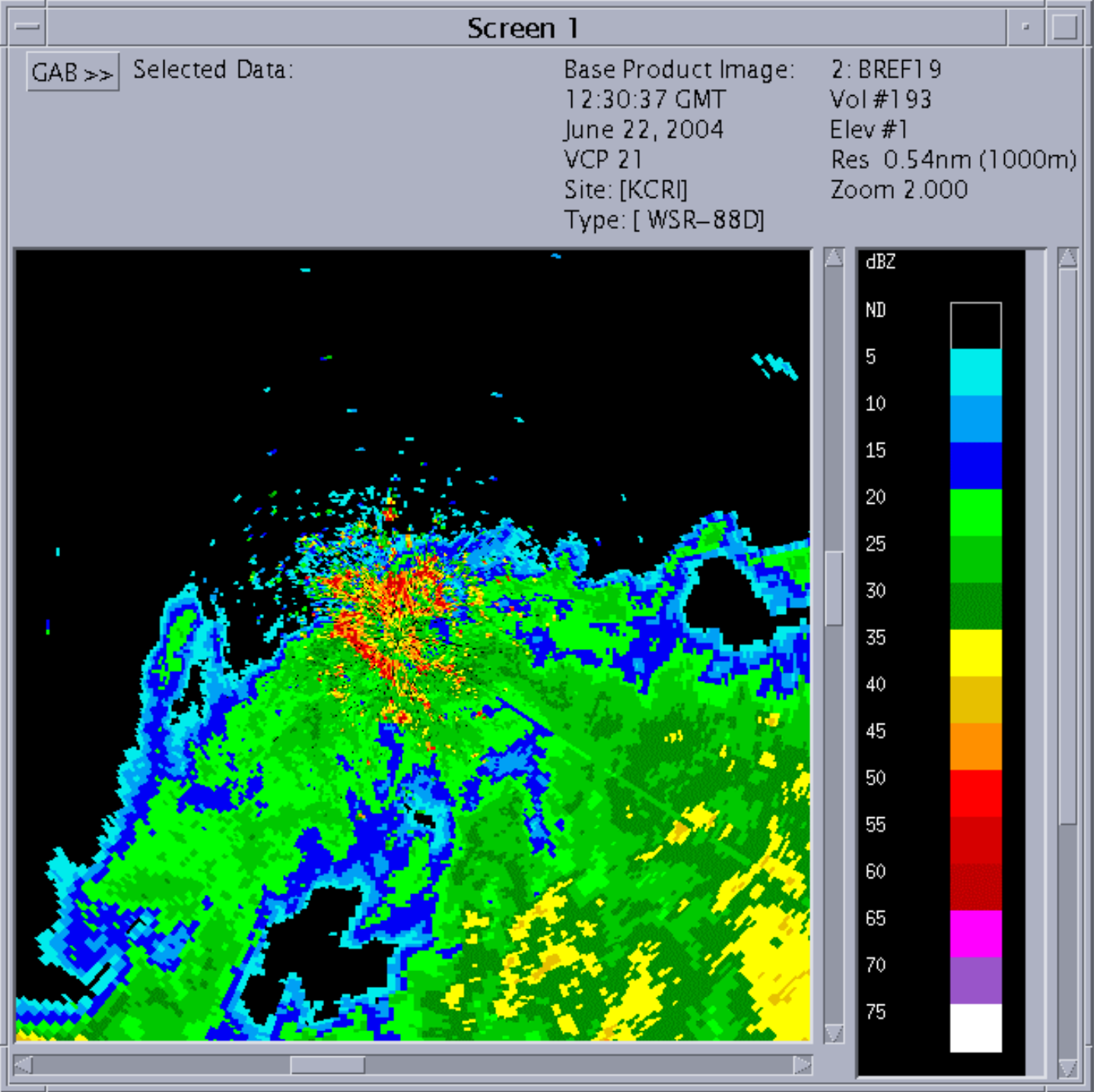
ORDA / T1
Reflectivity
VCP 21
2 June 2004
21:29:52 GMT

Incorrect range normalization

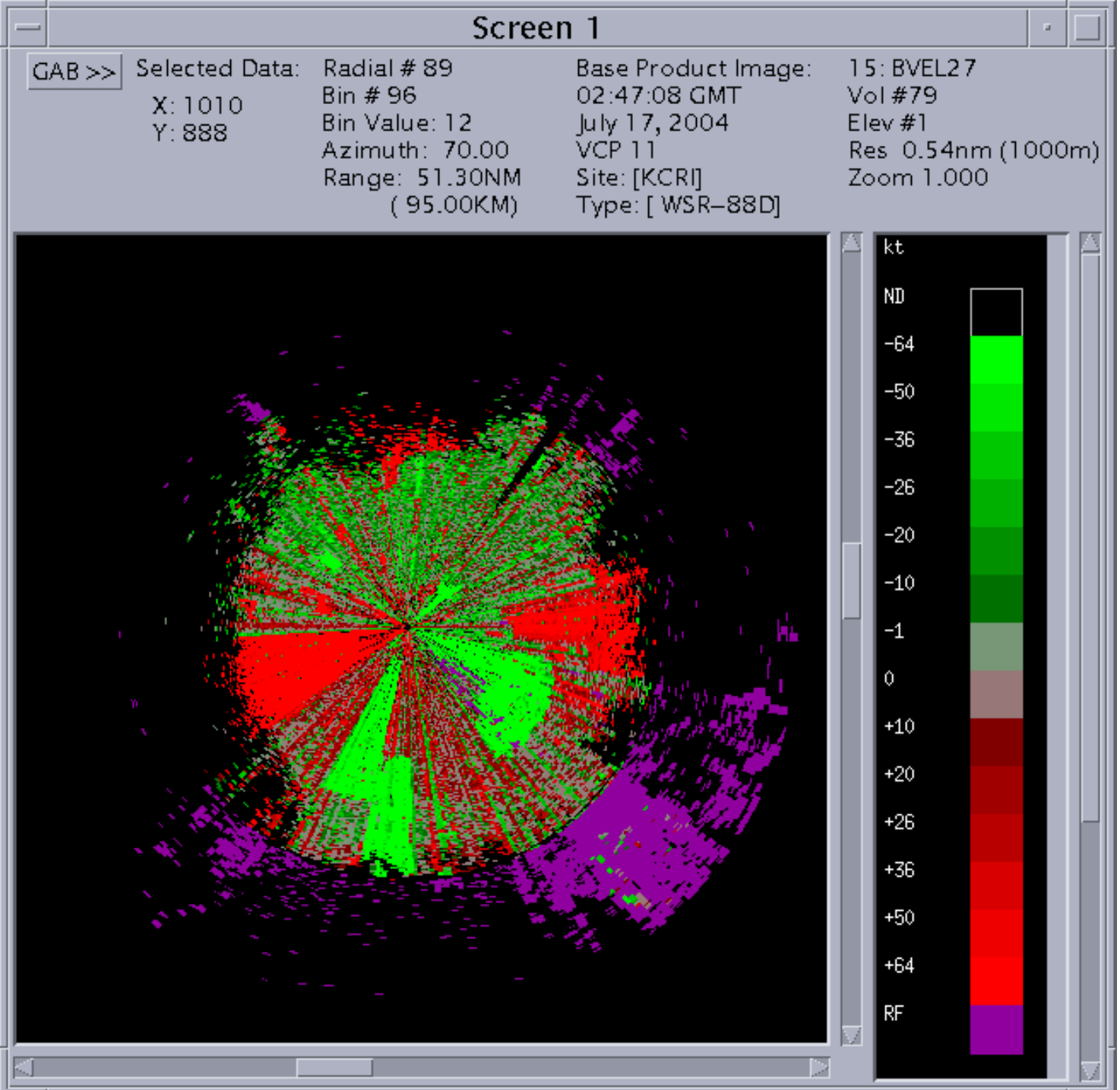
KTLX / T1
Reflectivity
VCP 21
2 June 2004
21:29:42 GMT



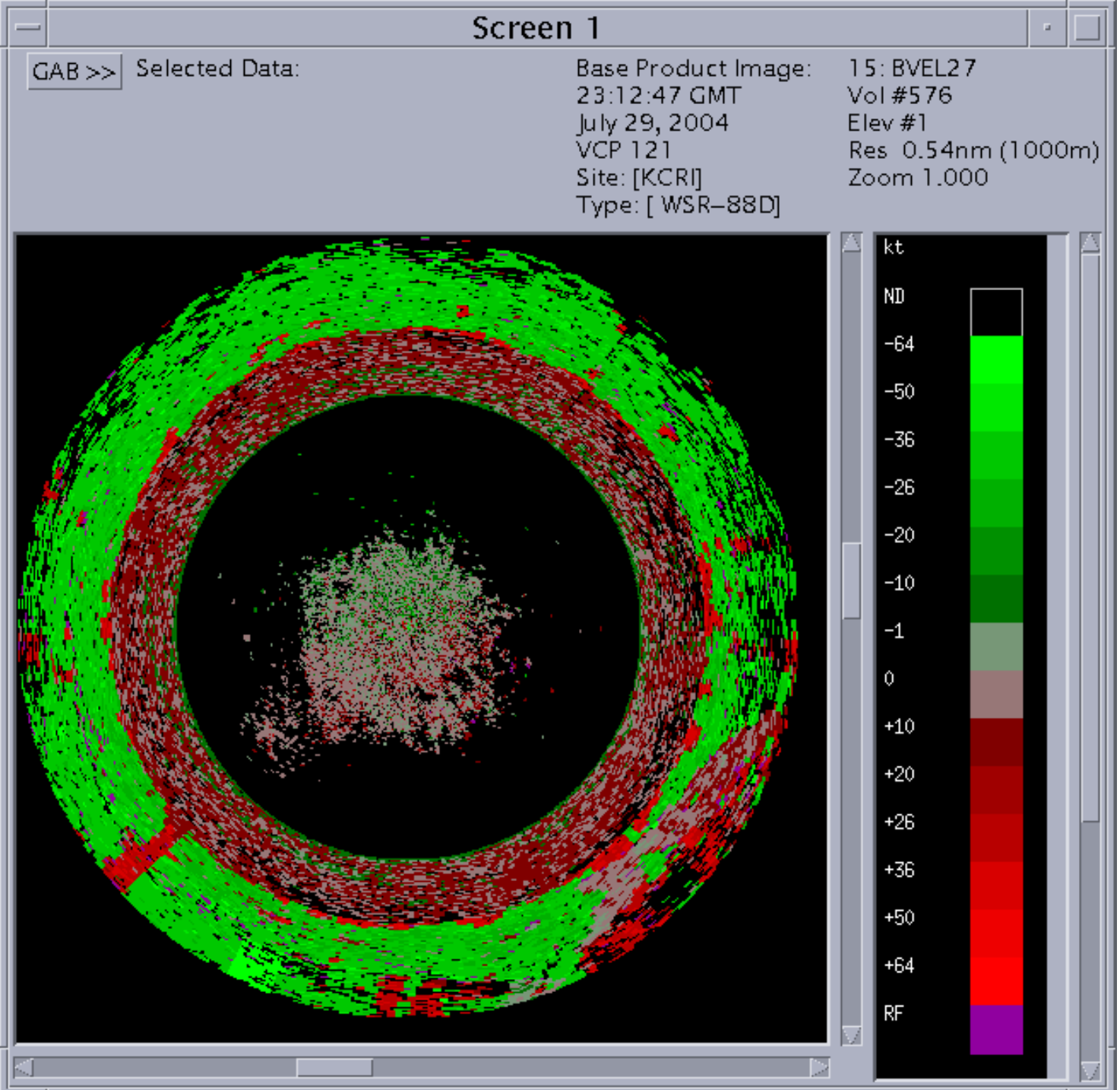
Noisy data in the range folded region caused by incorrect processing.



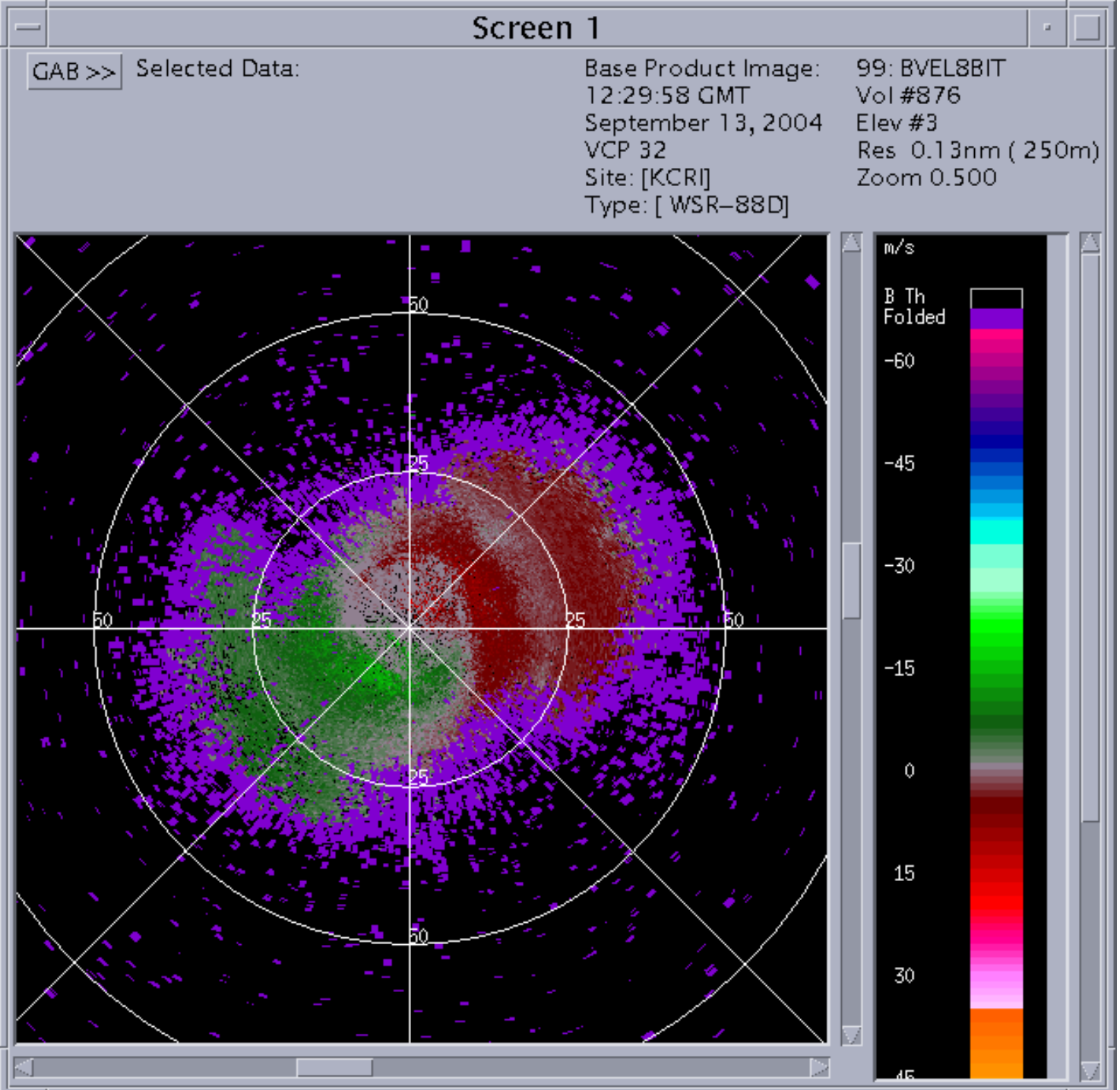
High reflectivity values caused by incorrect calibration.



Bad velocity values caused by initial problems with new hardware.

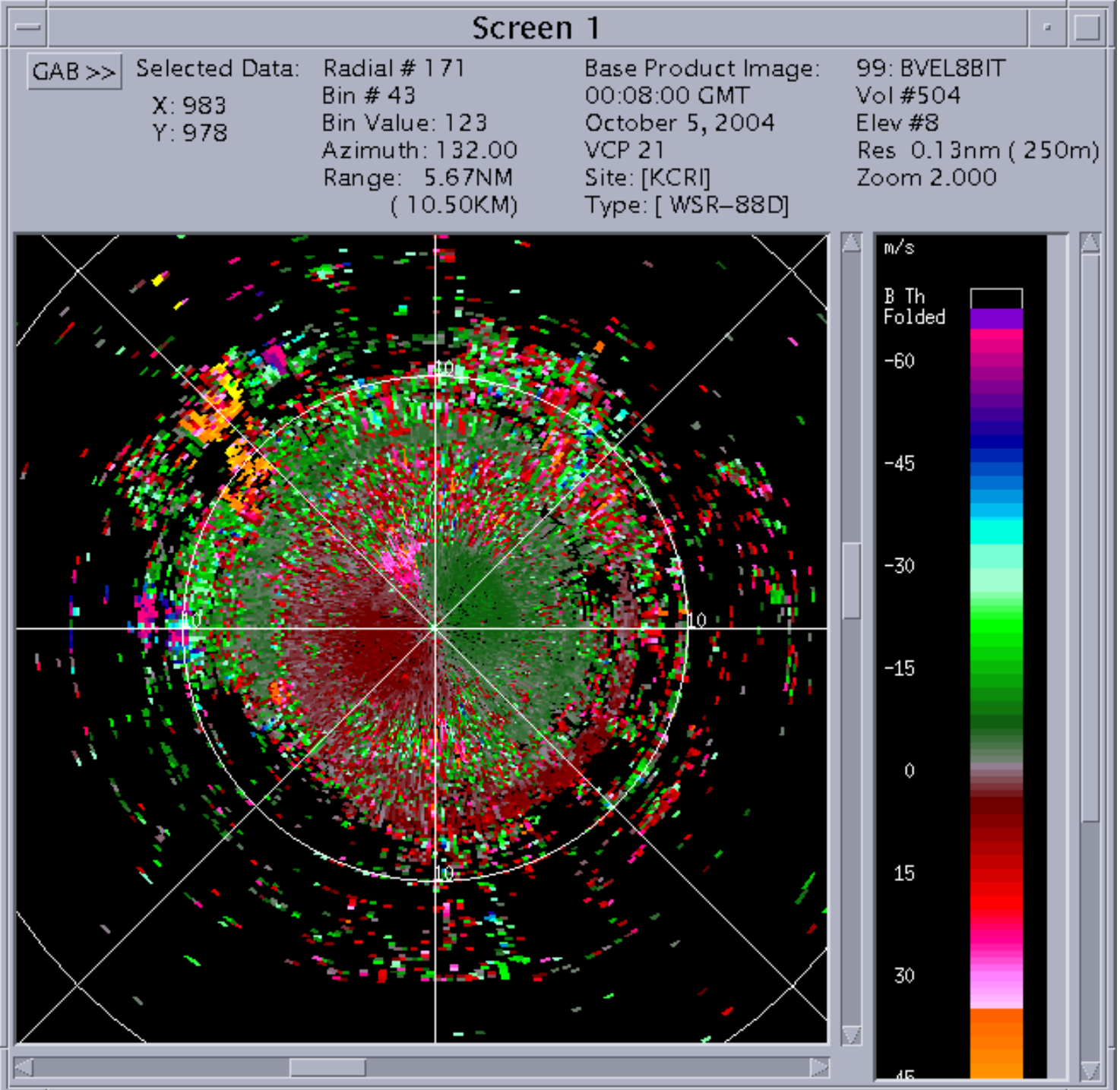


Bad velocity values caused by incorrect processing of VCP 121.



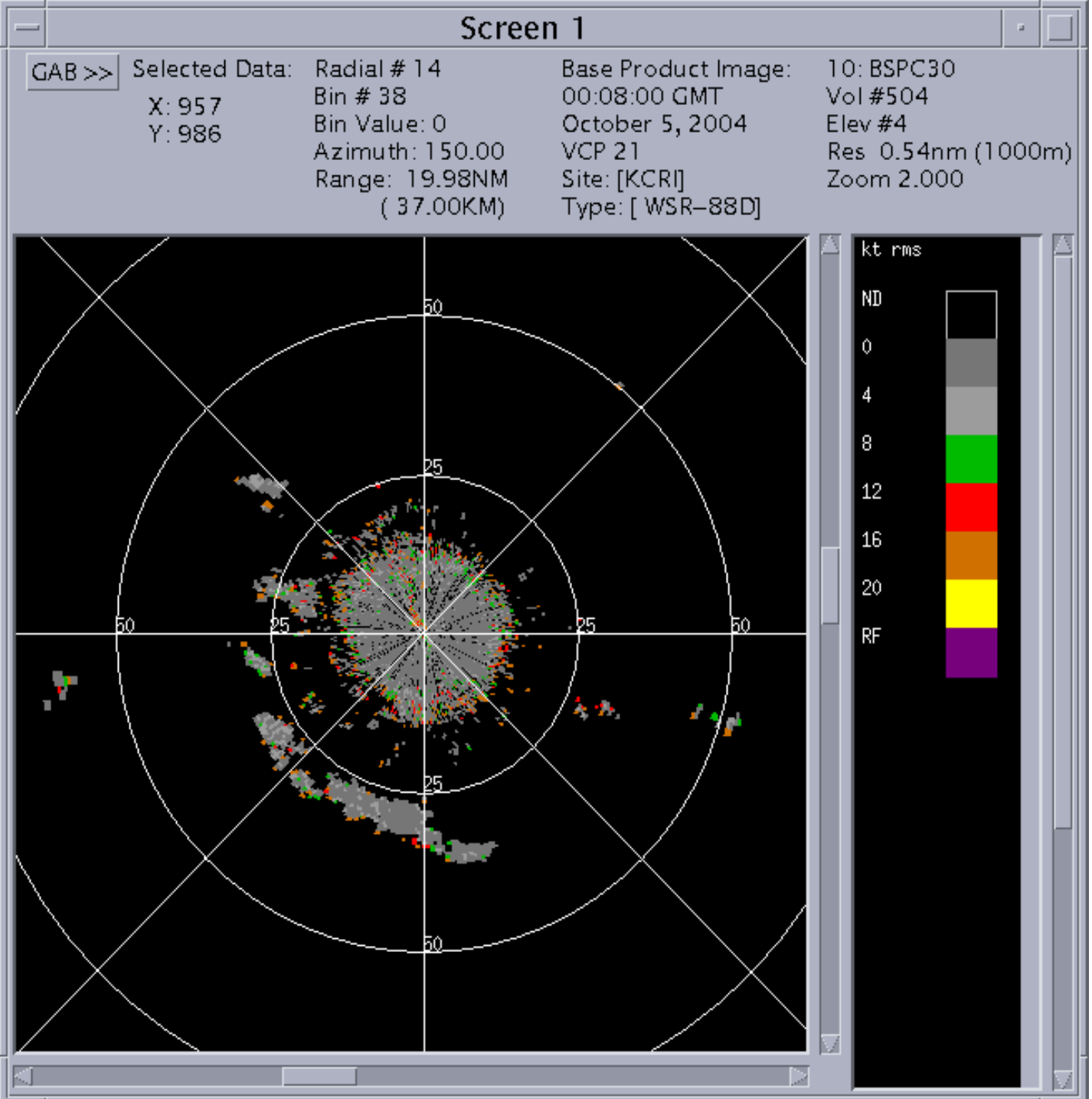
Incorrect range folding on upper tilts.

Problems Remaining



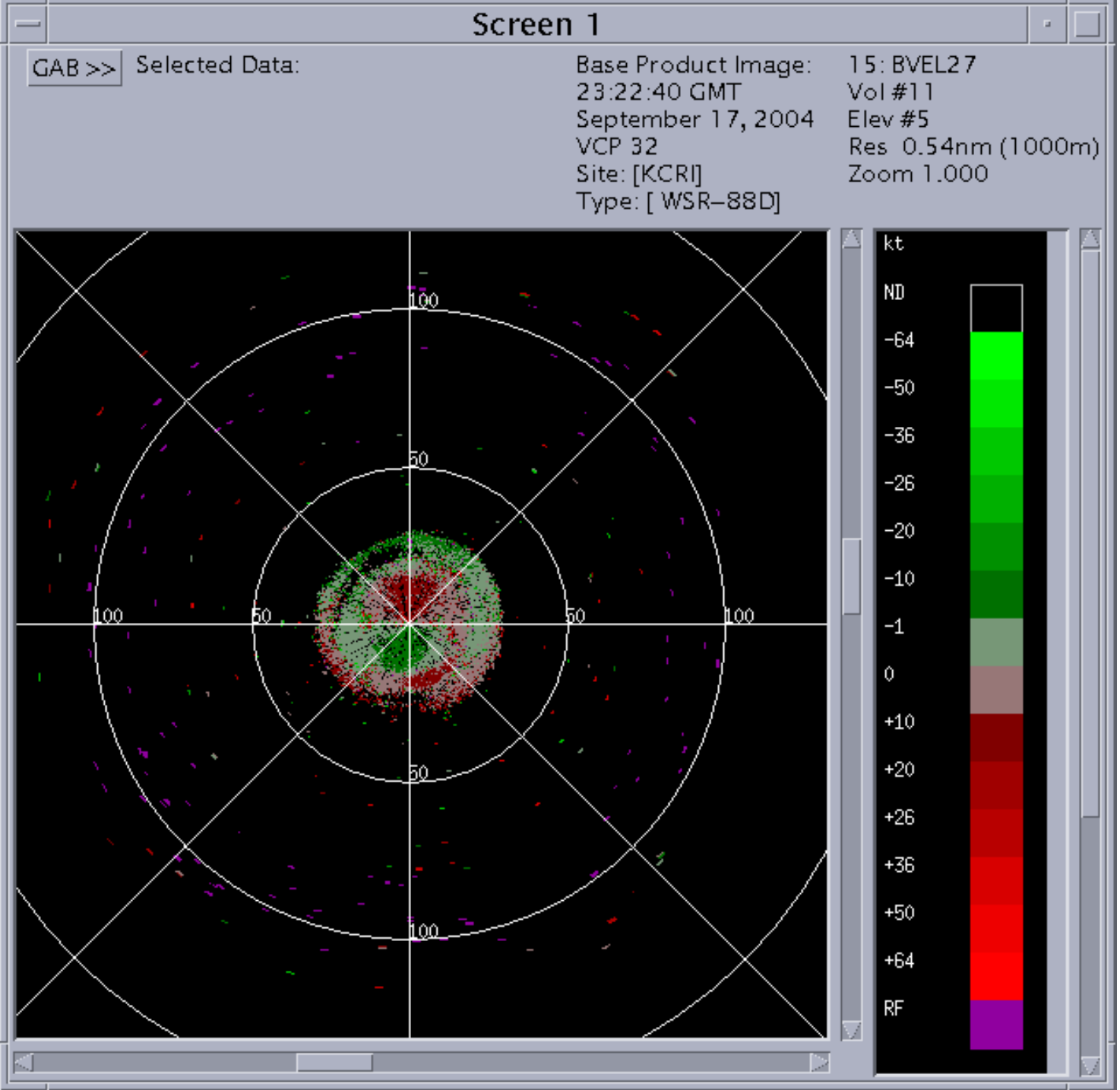
Excessively high velocity values at higher tilts.

May be related to a threshold problem.



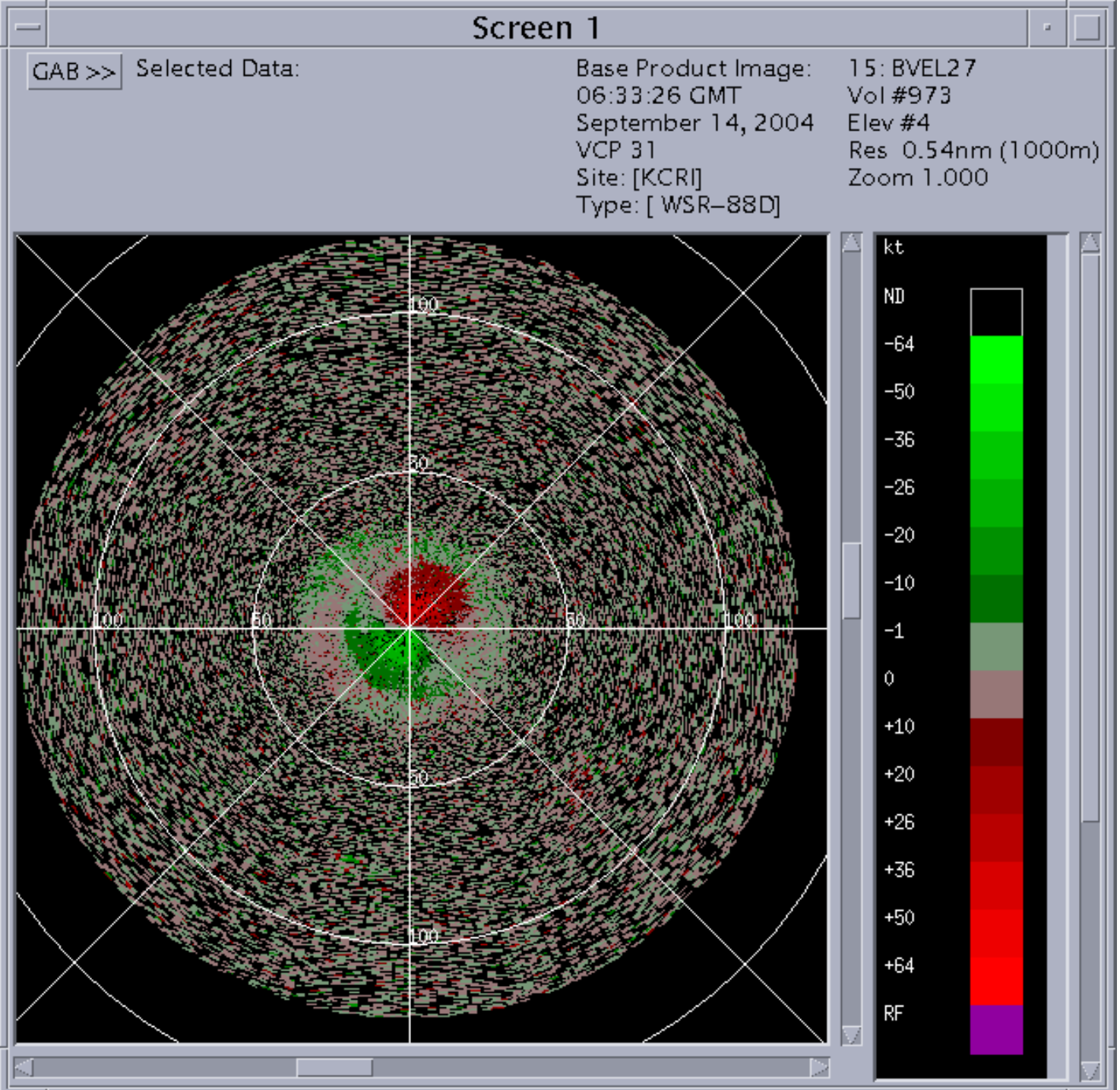
Excessively high spectrum width values at higher tilts.

May be related to a threshold problem.



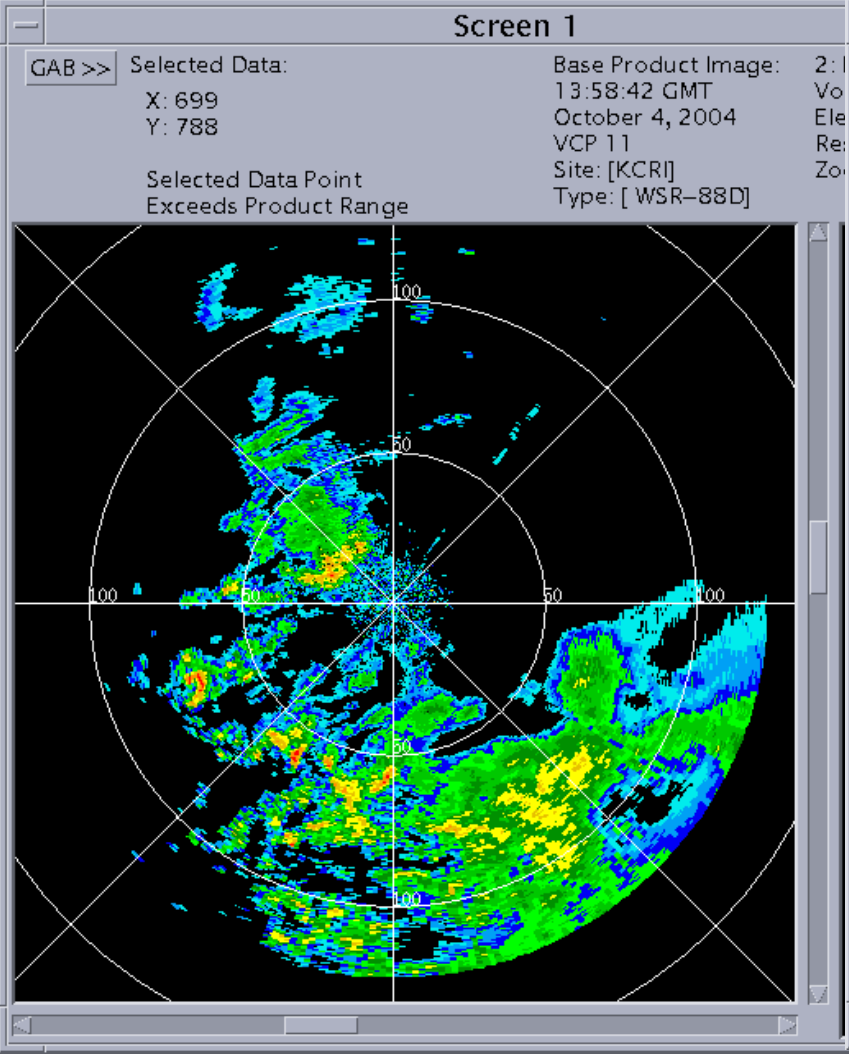
Noise in velocity and spectrum width upper tilts.

May be related to a threshold problem.

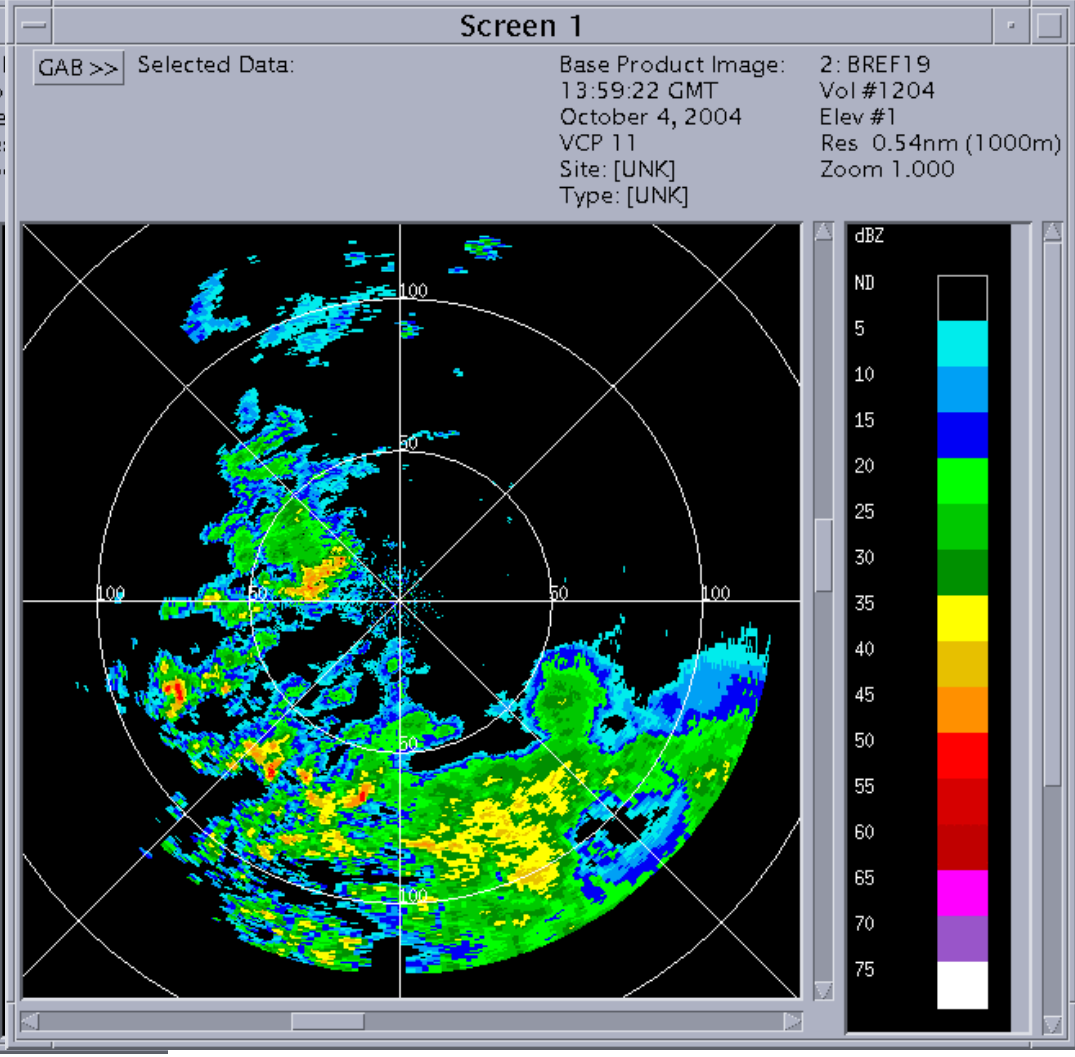


Bad velocity values on upper tilts in VCP 31.

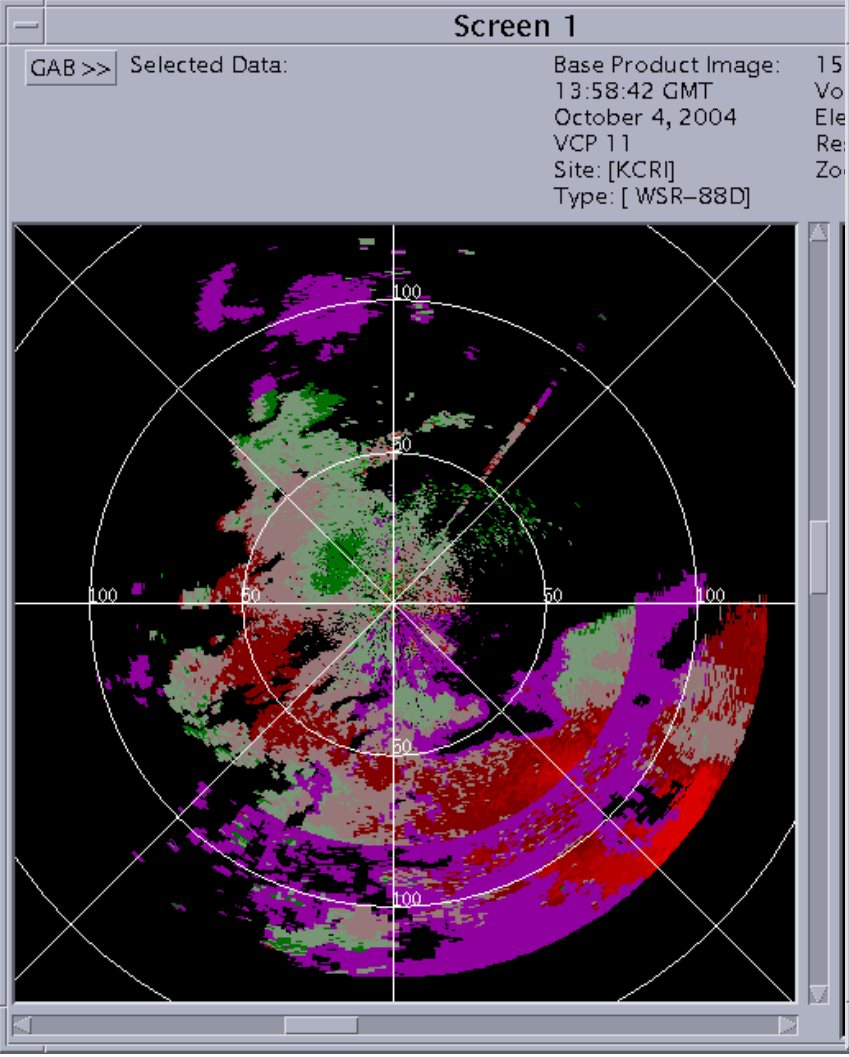
Good Looking Data

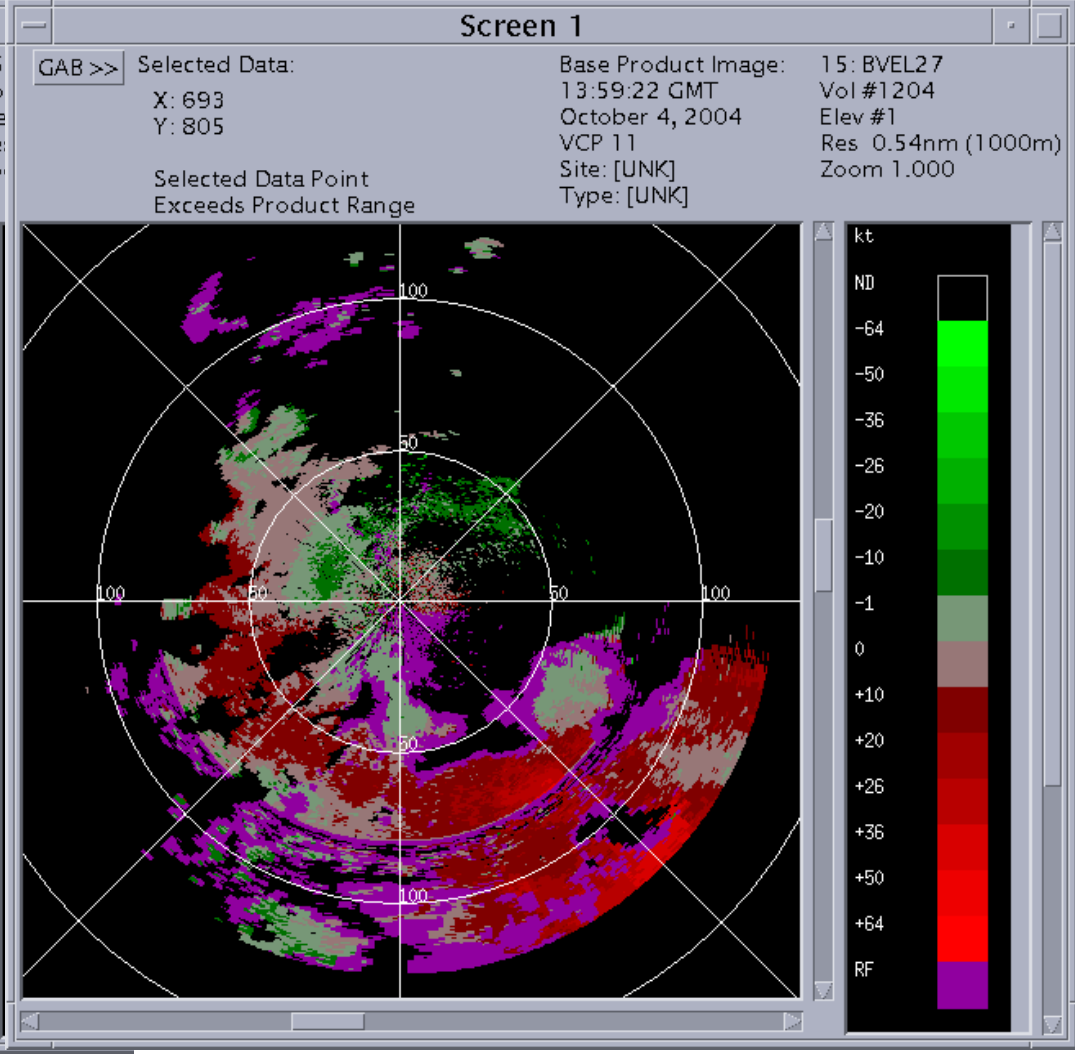


ORDA / T1
Reflectivity
VCP 11
4 October 2004
13:58:42 GMT



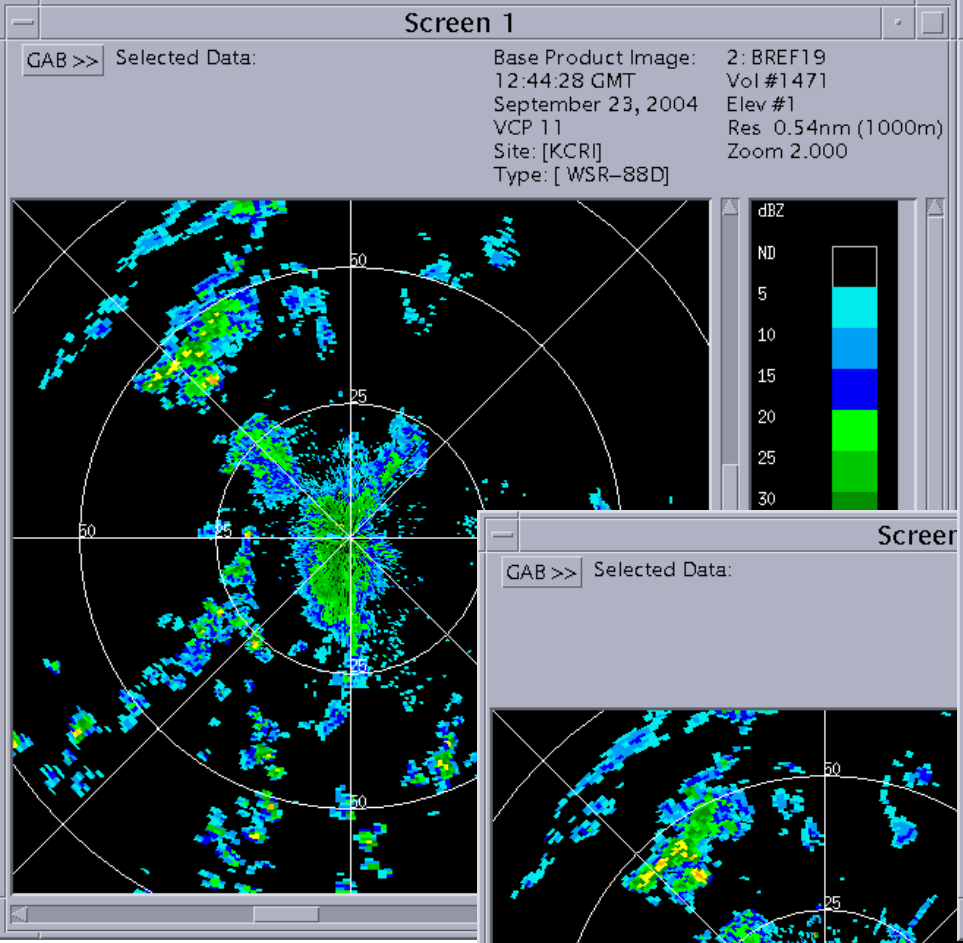
KTLX / T1
Reflectivity
VCP 11
4 October 2004
13:59:22 GMT

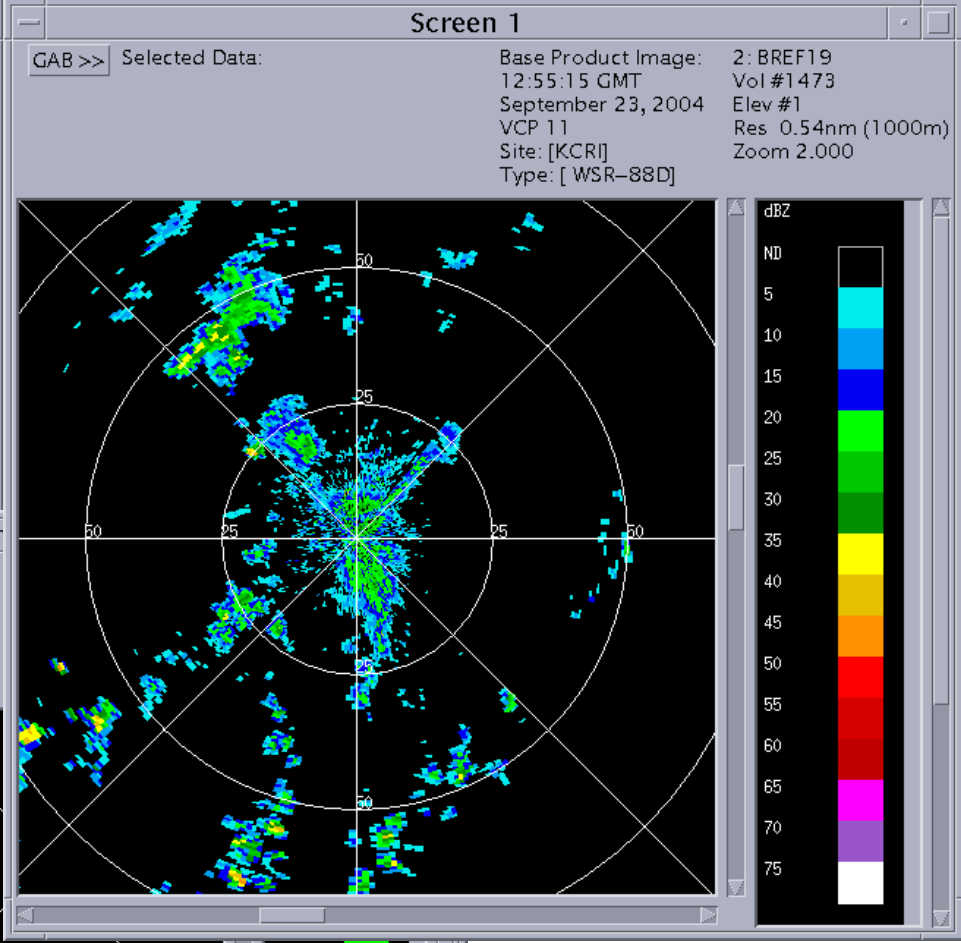


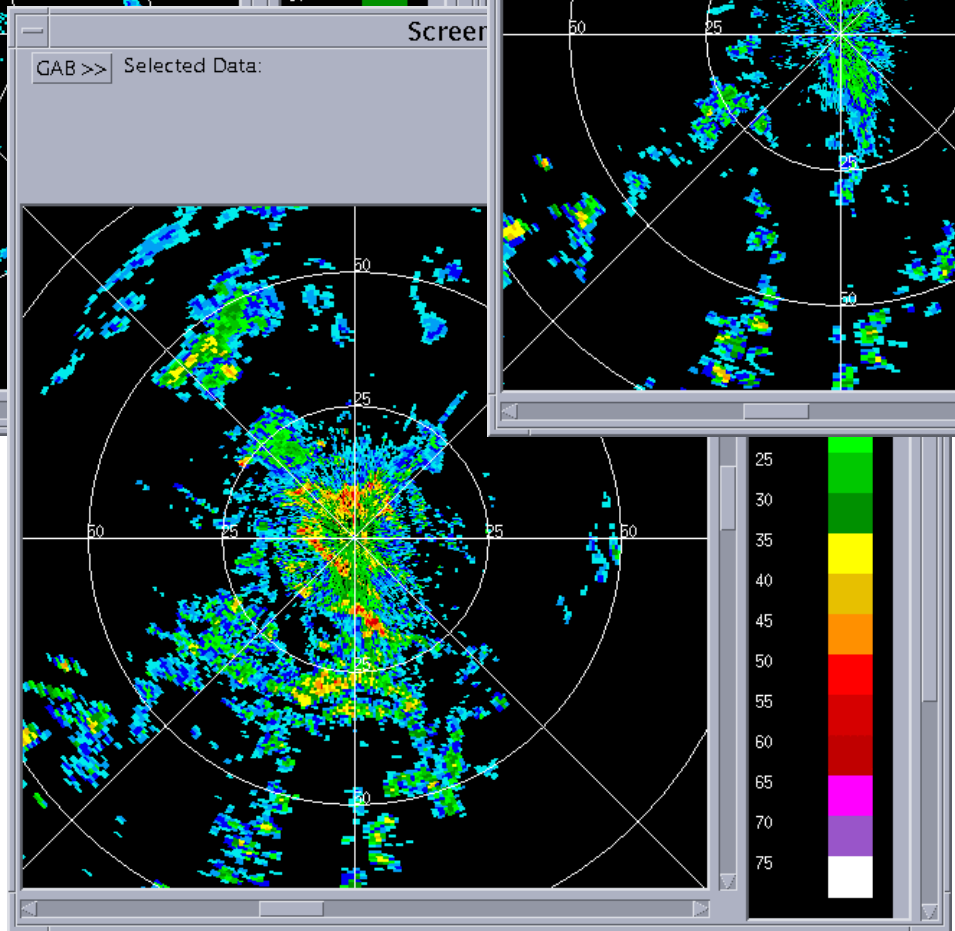


NOP4 / T1
Velocity
VCP 11
4 October 2004
13:58:42 GMT

KTLX / T1
Velocity
VCP 11
4 October 2004
13:59:22 GMT





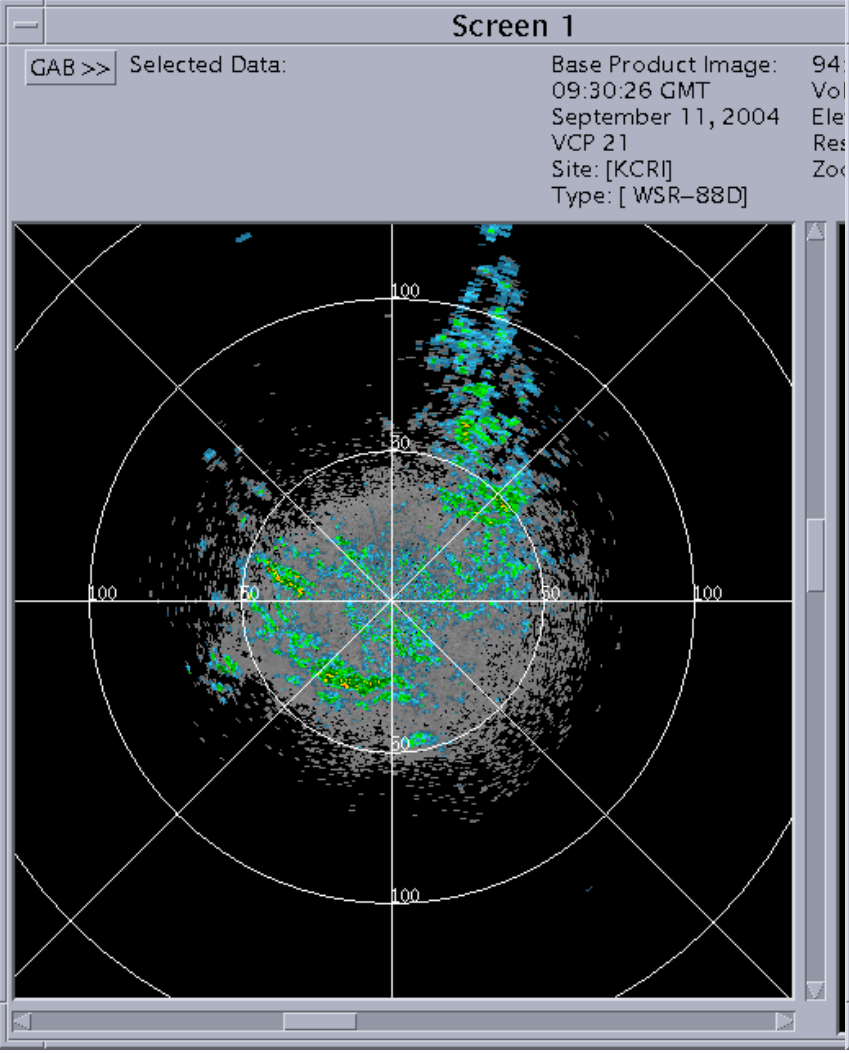


GMAP Everywhere

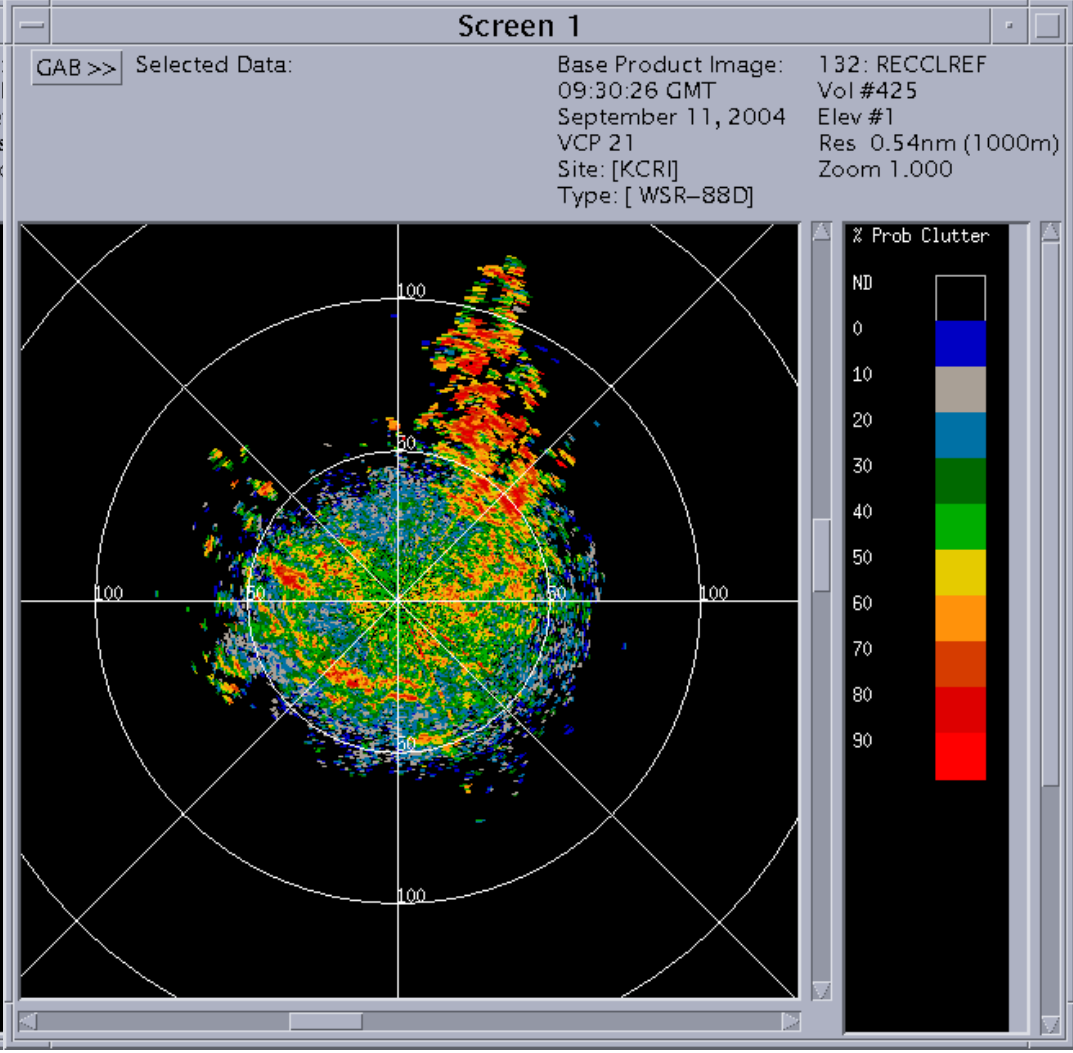
Bypass map generated in 10 to 15 minutes.

Bypass Map

GMAP Off

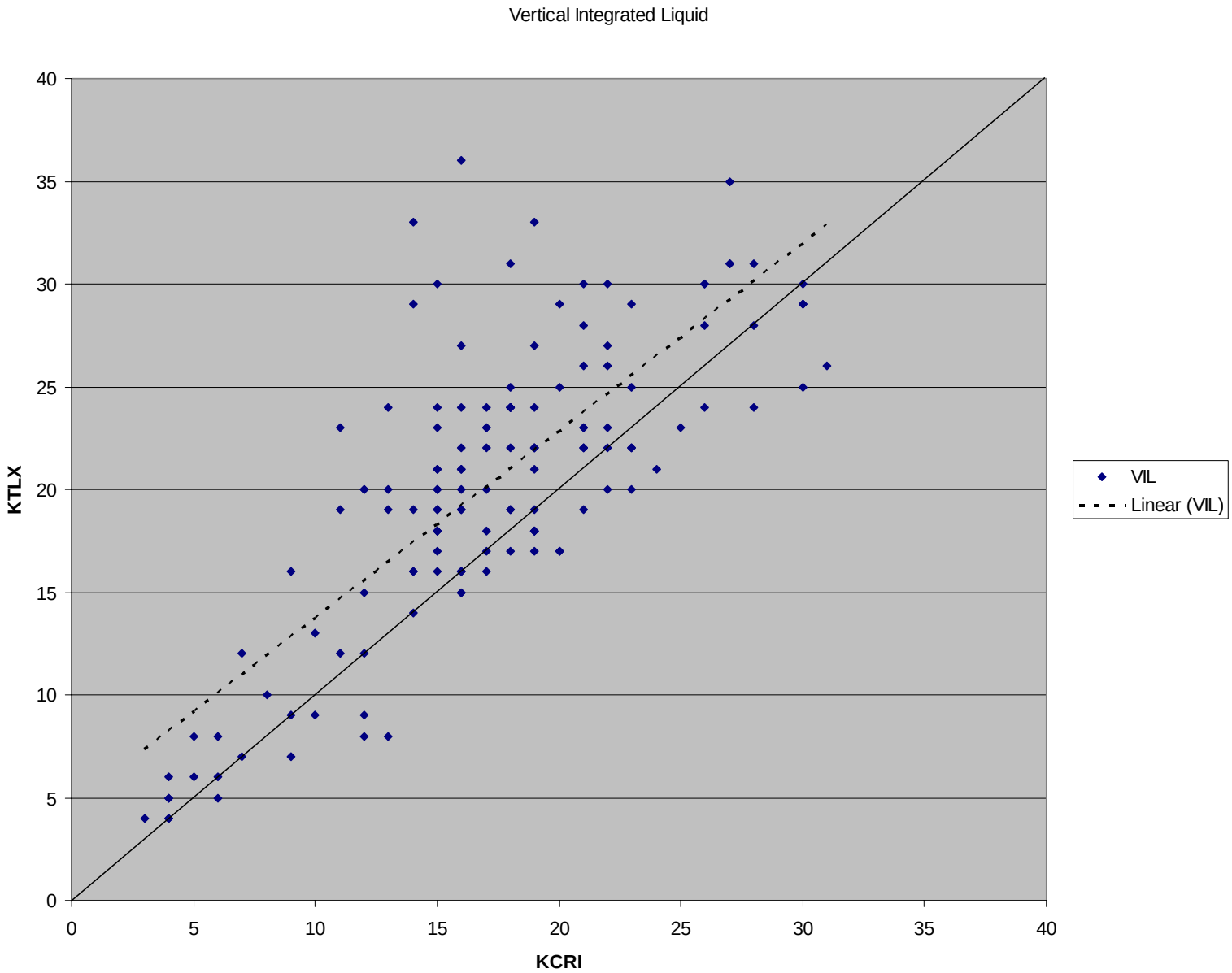


NOP4
DR
VCP 21
11 September 2004
09:30:26 GMT

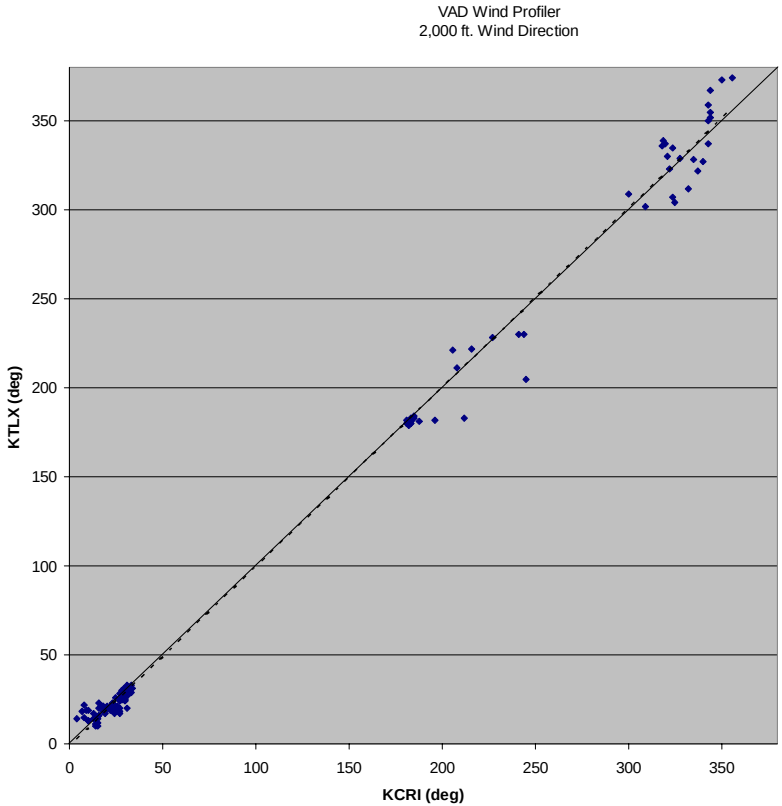


NOP4
REC Algorithm CLR
VCP 21
11 September 2004
09:30:26 GMT

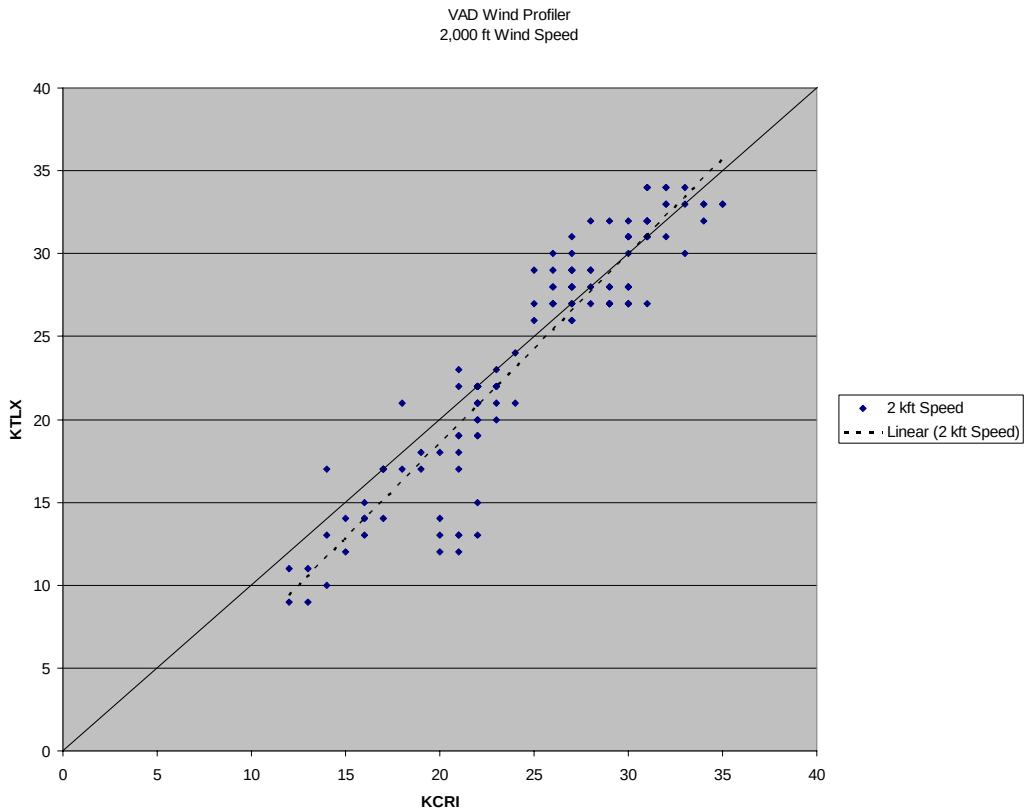
Algorithm Comparison



Max VIL Correlation = 0.78



Wind Direction Correlation = 0.99



Wind Speed Correlation = 0.93